

Single-Cell Li-Ion/Li-Polymer Battery Travel Charger

MC34674

Archived

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The MC34674 is a fully integrated single-cell Li-Ion and Li-Polymer battery charger optimized for travel charger applications. The few external components required include a dual-color LED for charge-status indication, a negative-temperature-coefficient (NTC) thermistor circuit for setting the charge temperature window and two decoupling capacitors.

The MC34674 tolerates an input voltage up to 28 V, which allows low-cost ac/dc converters to be used for further system-cost reduction. A charge cycle of the MC34674 includes trickle, constant-current (CC) and constant-voltage (CV) charge modes. The CC-mode current is selectable from 50 mA to 1.05 A, with 10% accuracy and the constant-output voltage in the CV-mode is fixed at 4.2 V.

The MC34674 has many features such as trickle charging for a deeply-discharged battery, an internal timer for termination to prevent charging a failed battery, charger current thermal foldback for thermal protection and smart battery-connection verification to prevent charging in case there is no battery connected. It has a 2.6 V falling power-on-reset (POR) threshold, making it ideal to work with current-limited power supplies. When the charger is disabled, the BAT pin leaks less than 1 μ A current from the battery.

Freescale MC34674 Battery Management Block Diagram Block Diagram

MC34674 Functional Block Diagram		
INTEGRATED SUPPLY		
Internal Supply & Reference		
SENSING & CONTROL		
V _{IN} Monitor	Charge Control	Power MOSFET
End of Charge	VIN - BAT Compare	
Die Temperature Feedback		
NTC Thermistor Interface		
LOGIC		
Logic Control		
Status Indication		
Integrated Supply Sensing & Control Logic Power MOSFET		

View additional information for Single-Cell Li-Ion/Li-Polymer Battery Travel Charger.

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